

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: TUBE		
Job Number	: 31776				
Estimate Number	: 12773				
P.O. Number	: N/A	Part Number	: 41232 200 002 001		
This Issue	: 4/12/2007      S.O. No. : N/A	Drawing Number	: 41232-200-002 REV A		
Prsht Rev.	: NC	Project Number	: N/A		
First Issue	: N/A      Type : MACHINED PARTS	Drawing Revision	: A		
Previous Run	: 31019	Material	: N/A		
Written By	:	Due Date	: 5/10/2007	Qty:	8 Um: Each
Checked & Approved By	:				
Comment	: Est Rev:A New Issue 07-03-05 JLM				

Job Number:

Seq. #:	Machine Or Operation:	Description :
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1.0	M2024T3H1375	2024-T3 Hex Bar 1.375"
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Comment: Qty.: 0.4550 f(s)/Unit Total: 3.6397 f(s)  
2024-T3 Hex Bar 1.375"  
Batch: 103753

20	LATHE CONV.	CONVENTIONAL LATHE
----	-------------	--------------------

Comment: CONVENTIONAL LATHE  
Turn as per Dwg 41232-200-0021

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE

**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

4.0	MILLING CONV.	CONVENTIONAL MILLING MACHINE
-----	---------------	------------------------------

Comment: ~~CONVENTIONAL MILLING MACHINE~~ HAAS  
125 Mill as per Dwg 41232-200-002 FA 687

2-Deburr

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--





**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

6.0                      QC8                      SECOND CHECK

Comment: SECOND CHECK

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 01/05/14  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>07/04/29</u>	<u>4</u>	1 part is scraped - prototype trial error - errors in pgm causing part not to be good	 <u>J-L</u>	- scrap + replace	<u>J-L</u> <u>07/04/29</u>	 <u>07/04/30</u>	 <u>07/04/30</u>	 <u>07/04/30</u>

NOTE: Date & initial all entries

Date: Thursday, 4/12/2007 9:32:59 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE

Job Number: 31776

Part Number: 41232 200 002 001

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

OUTSIDE SERV.30

OUTSIDE SERVICES-MACH



Comment: Sub-Contracting PURCHASING

Issue P/O: 3680

Black Anodize as per Dwg 41232-200-005

Ensure Certificate of Conformity is attached

CL 7/05/02

(8)

8.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

CL 1/5/9

(8)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

CL 05-10 (8)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

CL 07/05/10 (8)

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

CL 07/05/11 (8)

Job Completion



CL 07/05/11

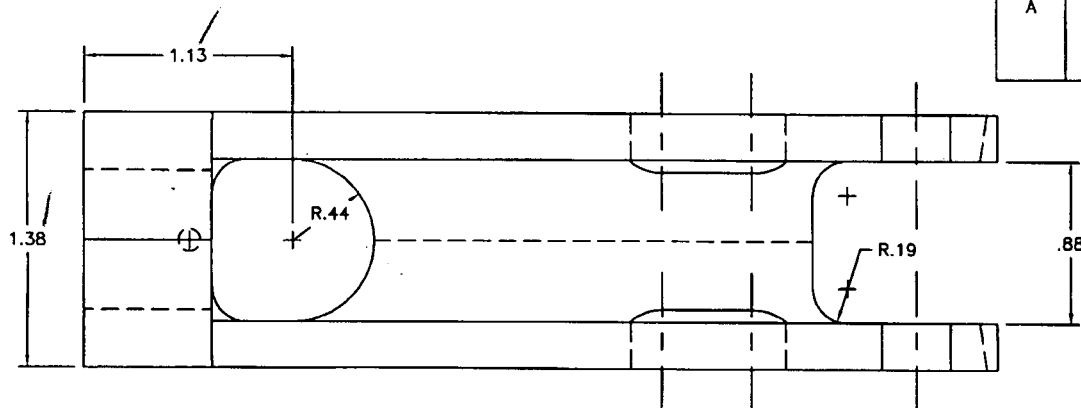
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

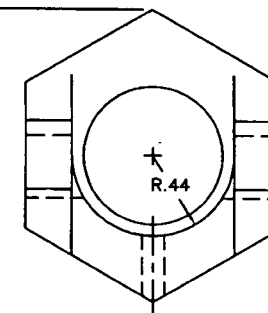
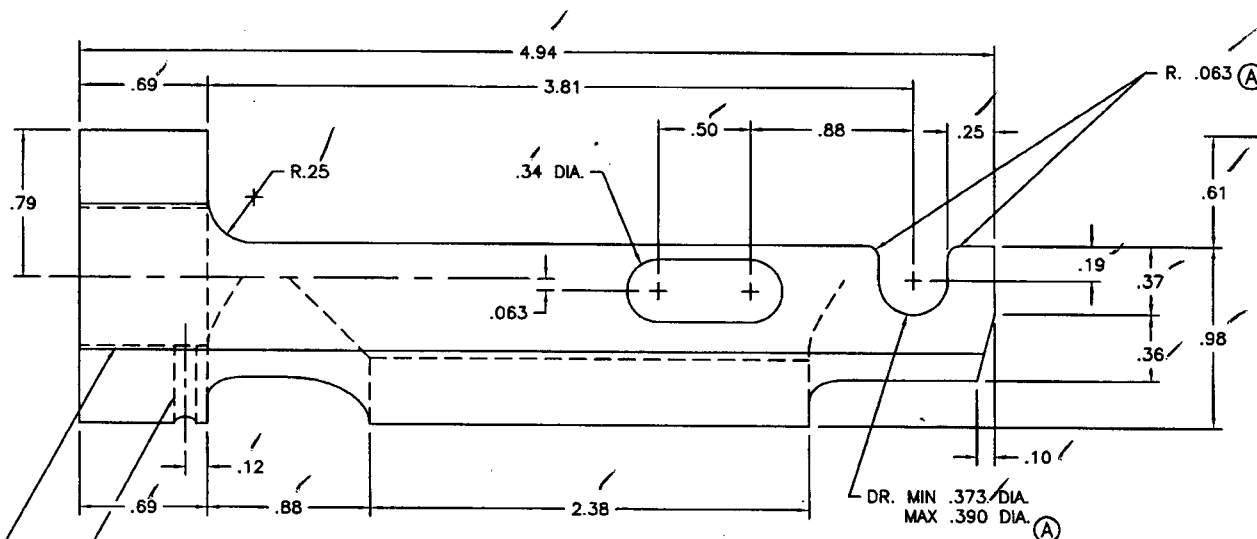
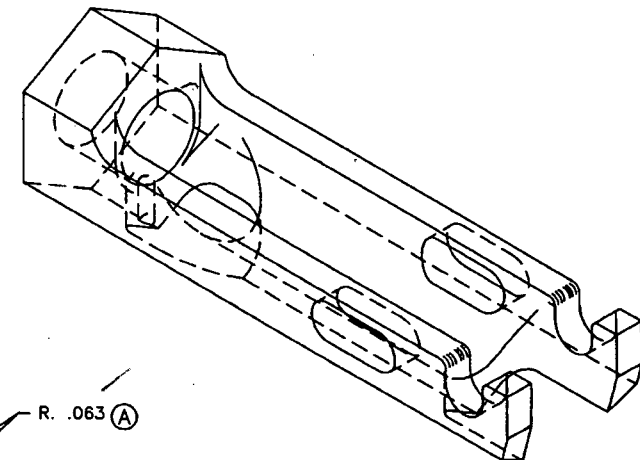
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



REVISION				
LETTER	DFTSMAN	DATE	DESCRIPTION	APPROVED DATE
A	DNN	2/17/03	ADDED SMOOTH EDGES TO -001 & -003; REDUCED LENGTH OF -003 BY .125"; ADDED DRAIN HOLE TO -001; INCREASED DIA. OF AFT SLOT ON -001.	
MINOR CHANGE - FAR 21.95			CHECK D. MURPHY	2/17/03



-001 TUBE

DR. .12 DIA DRAIN HOLE  
(NOTE: SPOTFACE IF REQ'D  
TO DRILL HOLE)

3/4"-20 THD,

SHOP COPY  
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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
31776

ANODIZE IN ACCORDANCE WITH MIL-A-8625, TYPE III, CLASS 2  
DYED BLACK.

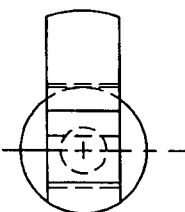
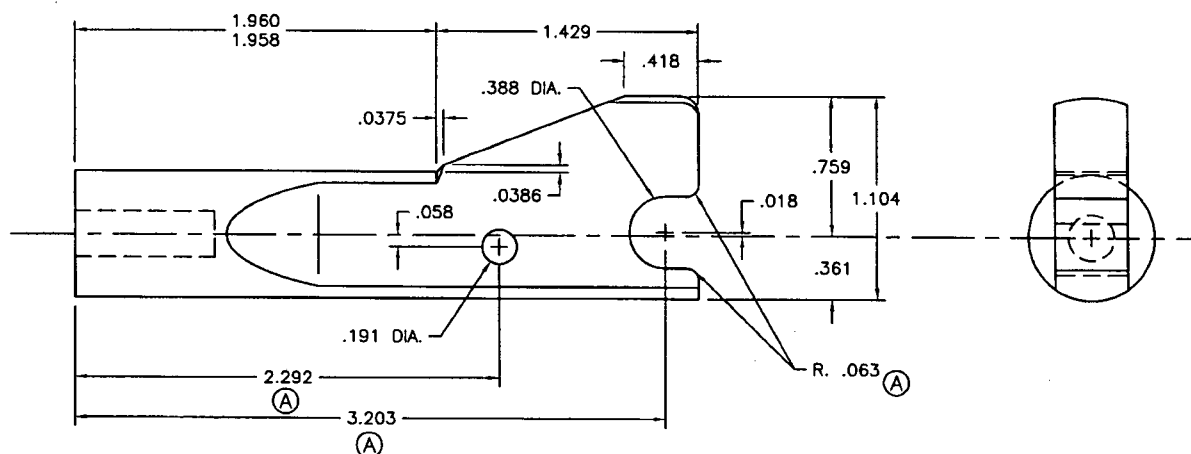
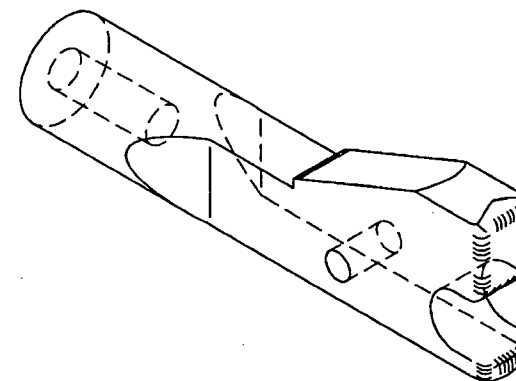
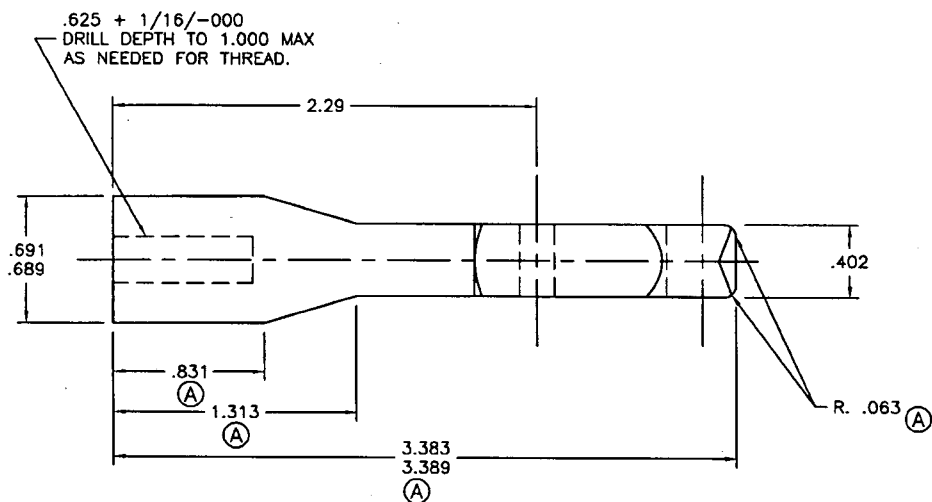
NOTE:

TYPE II  
[Signature]

NO.	REQ'D PER ASSY	PART NO.	NAME	STOCK SIZE	MATERIAL	MATLSPEC	ZONE
1		MS21209F4-15	INSERT				
		-005	PIVOT ARM	1.00 DIA. x 3.56	2024-T4, T351 ALUM.		
		-003	LATCH	1.11 x 3.50	2024-T4, T351 ALUM.		
		-001	TUBE	1.38 HEX STK. x 4.94	2024-T4, T351 ALUM.		
		-005					

LIST OF MATERIAL				STEP ACTUATOR COMPONENTS			
PROPRIETARY RIGHTS NOTICE	UNLESS OTHERWISE SPECIFIED	DRAFTSMAN	D. NELSON	2/18/02	TITLE	STEP ACTUATOR COMPONENTS	
THESE DATA ARE PROPRIETARY TO ENA AVIATION, INC. NO DISCLOSURE, REPRODUCTION, OR USE OF THESE DATA FOR ANY PURPOSE IS FORBIDDEN WITHOUT WRITTEN AUTHORIZATION FROM ENA AVIATION, INC. THE FOREGOING DOES NOT APPLY TO VENDOR PARTS.	X.2.1 XX.2.03 XX.2.010 ANGLES 4.1/2"	CHECK	D. MURPHY	2/18/02			
		STRESS				DWG. SIZE	C
		PROL. ENGR.				SCALE	2:1
		HEAT TREAT				DWG. NO.	41232-200-002
		FRESH				SHT	1 OF 3
						REV.	A

Ena Aviation, Inc.



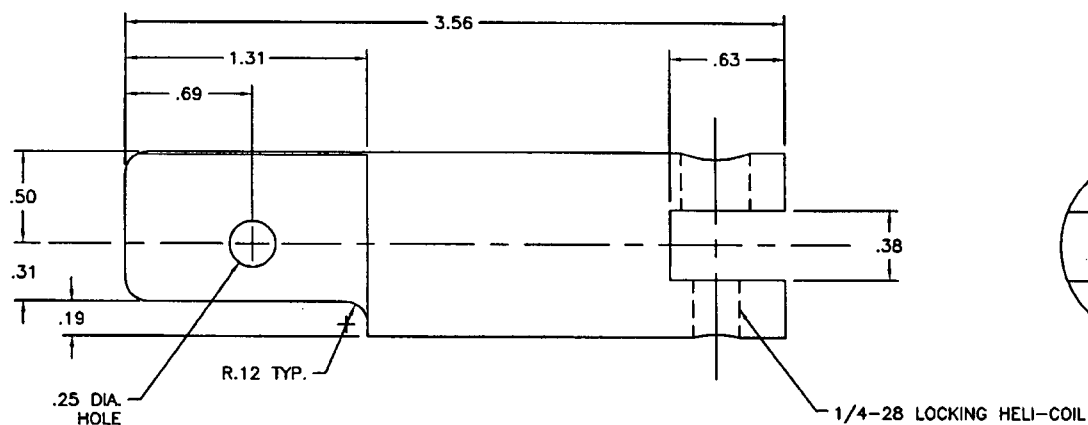
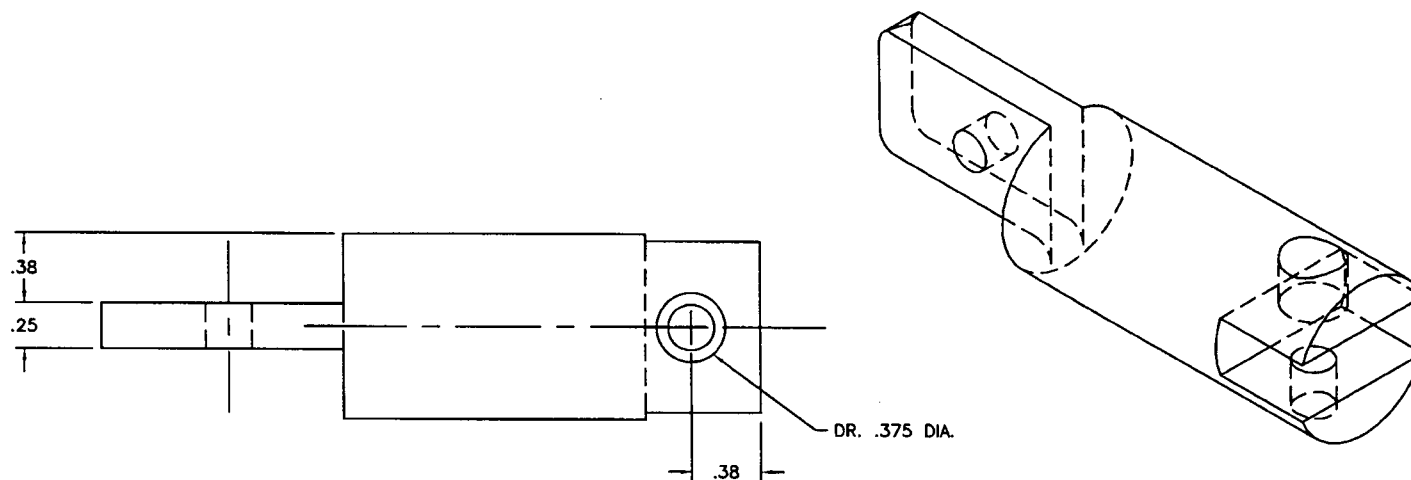
-003 LATCH

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WORK ORDER  
NO. 3172

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*Era Aviation, Inc.*

TITLE	SIZE	DWG. NO.	REV.
STEP ACTUATOR COMPONENTS	C	41232-200-002 SHT 2 OF 3	A



-005 PIVOT ARM

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WORK ORDER  
NO. 31776

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TITLE  
STEP ACTUATOR COMPONENTS

SIZE  
C

DRAW. NO.  
41232-200-002  
SHT 3 OF 3

REV.  
A

DATE 2/26/04	ENGINEERING ORDER	E.O. No. B-1	SHT. 1 OF 1
BY D. NELSON		DWG. AFFECTED 41232-200-002	
APPROVED BY		SHEET AFFECTED SHT 1 & 3	
TITLE STEP ACTUATOR COMPONENTS			

REASON FOR CHANGE: CHANGED DASH NO. OF INSERT ON L/M; CHANGED INSERT CALLOUT ON  
-005 PIVOT ARM.

MINOR CHANGE - FAR 21.95

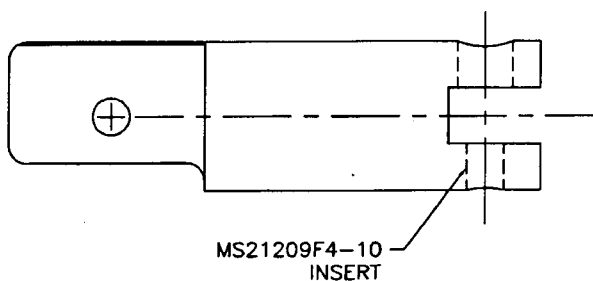
IS

1	MS21209F4-10	INSERT
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WAS

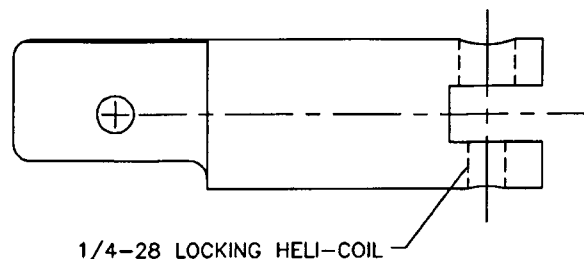
1	MS21209F4-15	INSERT
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IS



-005 PIVOT ARM

WAS



-005 PIVOT ARM

CHANGE REQUIRED:	DATE:	BY: SHOP COPY	YES	NO
TRAVELER		RETURN TO		
INSTALLATION INSTRUCTIONS		ENGINEERING		
MAINTENANCE INSTRUCTIONS		UNCONTROLLED COPY		
ILLUSTRATED PARTS		SUBJECT TO AMENDMENT		
UNINCORPORATED DRAWING LIST		WITHOUT NOTICE		
MASTER DRAWING LIST		WORK ORDER		
COMPUTER DATA BASE		NO. 31776		



DART AEROSPACE LTD		Work Order: 31776
Description: Tube		Part Number: 41232 200002001
Inspection Dwg:	Rev: A	Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.69	± 0.030	0.69	✓			
0.44 Radius	± 0.030	0.44	✓			
3/4-20 Ø min →	0.696	0.697	✓			
max →	0.707					
4.94	± 0.030	4.94	✓			
1.38	± .030	1.375	✓			
1.13	"	1.130	✓			
.88	"	.880	✓			
.69	"	.695	✓			
1.25	"	.250	✓			
.34	"	.342	✓			
4.94	"	4.941	✓			
.12	"	.122	✓			
.88	"	.881	✓			
2.38	"	2.381	✓			
.375	.373 min .390 max	.376	✓			
.98	± .030	.974	✓			
.36	"	.380	✓			
.37	"	.355	✓			
.19	"	.183	✓			
.61	"	.606	✓			
1.063	± .010	.063	✓			
.25	± .030	.245	✓			
.50	"	.498	✓			

Measured by: DSP/SI	Audited by: JML	Prototype Approval:
Date: 07/04/28	Date: 07/04/29	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

DSP(S)

**TNM****ANODISATION et PEINTURE TNM INC.****FACTURE  
INVOICE**

21 chemin de l'Aviation, QC H9R 4Z2  
Telephone: (514) 429-7777 Fax: (514) 429-5108  
Certifié ISO 9001-2000 / ISO 9001-2000 certified  
Certifié NADCAP / NADCAP certified

**55027****04-May-2007****CLIENT / CUSTOMER:**

**DART AEROSPACE LTD.**  
1270 ABERDEEN STREET  
HAWKESBURY , ONTARIO  
K6A 1K7

**PURCHASE ORDER/  
NO. DE COMMANDE:** **PO000003680**

**CONDITIONS / TERMS:**  
**NET 30 JOURS / NET 30 DAYS**

ITEM	COMMANDE ORDERED	EXPEDIE SHIPPED	PART NUMBER & DESCRIPTION	PRIX UNITAIRE UNIT PRICE	EXTENSION
1	26	26	VARIOUS -  <i>LOT PRICE</i>	VARIOUS  \$0.00	\$0.00
<i>2</i>					\$130.00
<b>SUB TOTAL:</b>					\$130.00
<b>TPS/GST:</b>					\$7.80
<b>TVQ/PST:</b>					\$0.00
<b>TOTAL AMOUNT DUE:</b>					\$137.80

**BLACK ANODIZE PER MIL-A-8625F TYPE II CLASS 2 ALL OVER**

No de TPS / GST #: 891559734 RT  
No de TVQ / QST #: 1019307154 TQ000

**CERTIFICAT DE CONFIRMITE EMIS POUR CHAQUE PROCEDURE**  
**CERTIFICATE OF COMPLIANCE ISSUED FOR EACH PROCESS**

*En cas de perte ou de dommages dû a la la valeur intrinsèque de certaines responsabilité se limitera à deux fois la valeur du traitement des pieces perdues ou endommagées.*

*Due to the intrinsic value of some parts, we are only liable for loss or damage to twice the invoiced finishing costs.*